



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/582,536

06/09/2006

Toru Shoji

TAN-123

9992

54630 7590 06/17/2009

ROBERTS & ROBERTS, LLP
ATTORNEYS AT LAW
P.O. BOX 484
PRINCETON, NJ 08542-0484

EXAMINER

WYSZOMIERSKI, GEORGE P

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

06/17/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Art Unit: 1793

1. Claims 1 and 3-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term “moldedly solidifying” in step (c) of instant claim 1 and elsewhere in the present application is not a standard term in the art, and thus its definition is ambiguous. Therefore claim 1 and any claims dependent therefrom are considered to be prima facie vague and indefinite.

This term has been amended from a different term which the examiner had found to render the claims deficient under 35 USC 112, and Applicant asserts that use of the new term overcomes the rejection under 35 USC 112. The examiner respectfully disagrees because:

a) No actual definition of this term has been asserted by Applicant, and none has been found by the examiner after consulting several reference manuals. Further, the examiner has performed a search for the term “moldedly adj solidif\$9”, i.e. the word moldedly followed by the word solidif... with anywhere from 0-9 letters after the “f”. After searching across a number of databases for this term, including U.S. Patents, U.S. Pre-Grant Publications, Derwent World Patents Index, EPO and JPO Abstracts, and IBM Technical Disclosure Bulletins, no documents have been found that include that term in those databases.

b) The present specification suggests that one embodiment of “moldedly solidifying” would be sintering. However, sintering is not equivalent to either molding or solidifying, and it is unclear what other operations besides sintering would or would not fall within the scope of the term as claimed.

Art Unit: 1793

In addition to the above, claims 7, 8, 11, and 18 are dependent upon canceled claim 2. Claims 10, 13, 15 and 20 are then dependent upon one of these claims. It is thus unclear how or whether these claims further limit the subject matter of a previous claim.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 3-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krotz et al. (U.S. Patent 5,915,160) in view of Newkirk et al. (U.S. Patent 5,007,476).

Krotz et al. discloses a process substantially as claimed, i.e. forming a powder of a material that meets the limitations of instant claims 5, 6, and 11-20 (such as gold and a dilute element such as a rare earth element), oxidizing this material in a ball mill, followed by consolidating (taken by the examiner to be substantially equivalent to "moldedly solidifying"). The ball mill used in the Krotz process would appear to meet the definition of an "attritor" as presently claimed. With regard to instant claims 4, 8, 9 and 10, this product can then be extruded; see Krotz column 3, lines 29-30.

Krotz does not disclose that the ball mill includes water as required by the instant claims. Newkirk indicates that it was known in the art, at the time of the invention, to include water in a ball mill used to form oxidized metal matrix composite materials; see Newkirk column 33, lines 54-67. With respect to claims 3 and 7, any water used in the prior art process is held to be

Art Unit: 1793

“ultrapure”, in the absence of any numerical or other objective definition of this term. It would have been obvious to one of ordinary skill in the art, carrying out the process of Krotz et al., to include water in the ball mill as taught by Newkirk et al., in order to ensure proper oxidation of the material undergoing the milling process.

4. In the response filed April 2, 2009, Applicant asserts that the claimed invention can be distinguished from the prior art in that the attritor or other types of mills recited in instant claim 1 are distinct from those used in the Krotz process, and/or that the purpose of the water as used by Newkirk is different from its purpose in the present invention. Applicant's arguments have been carefully considered, but are not persuasive of patentability because:

a) With regard to the type of mill employed, Applicant contends that the prior art does not use the presently claimed "high-energy" mill. However, it is unclear how much energy would be required to result in a "high-energy" mill, and in any event no specific difference has been shown between the stirring power or other energy aspects of the mill used by Krotz and that used in the claimed process.

b) With regard to the water, the instant claims state that one oxidizes a material by introducing the material into a mill with water. Newkirk clearly introduces water into a mill for the purpose of forming oxidized metal matrix composite materials. The examiner's position is that the water of Newkirk would have the effect of oxidizing materials that it comes into contact with in the mill of the prior art.

Art Unit: 1793

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/George Wyszomierski/
Primary Examiner
Art Unit 1793

GPW
June 16, 2009